

REMARKS

Presently, claims 1-55 and 58-145 are pending in the application. Claims 56 and 57 were previously cancelled during the International Phase of the present application.

Claim Rejections – 35 U.S.C. §103(a)

The Examiner has rejected claims 1-7 and 11-39 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,424,770 to Schmelzer (“Schmelzer”) in view of U.S. Patent No. 6,661,516 to Carles (“Carles”). The Examiner contends that Schmelzer in combination with Carles teaches all elements of these claims. In particular, the Examiner acknowledges that Schmelzer does not teach or suggest correlating available subscriber characteristics with advertisement characteristics, but contends that Carles teaches these missing elements, and concludes that it would have been obvious to combine the teachings of Carles with those of Schmelzer to result in Applicants’ claimed invention. Applicants respectfully traverse this rejection.

Schmelzer discloses an apparatus for inserting television commercials from a remote source (satellite) into ongoing programming being received by at least two designated areas, each comprising a cable headend, without storage of the commercials at the headends (see column 3, lines 42-49 and Abstract). Schmelzer relies on sharing available satellite transmission advertisement time slots, such that commercials designated for one headend occupy a fraction of the time slot, leaving room in the remainder of the time slot for commercials designated for a different headend (column 9 line 55 – column 10, line 11). As such, the number of headends to which different advertisement programming can be sent is limited by the length of the available commercial time slot and the duration of the individual commercials. The commercial time slot occupies a fairly limited portion of the programming transmission signal since the bulk of the time is occupied by actual programming. Available commercial time slots are typically one to two minutes (column 10, lines 36-38). Thus, the number of headends

to which different commercials can be sent as a part of a single programming signal is significantly limited in Schmelzer.

In stark contrast to the limited number of broad areas to which different advertisements may be directed in Schmeltzer, Carles is directed to distributing commercial messages to individually addressable subscriber terminals (column 1, lines 62-65). Since Carles discloses “distributing commercial programming to selected target households” (column 1, lines 55-57), the viewers in Carles can each receive different commercials. There is no requirement, as in Schmelzer, that viewers in one geographic area serviced by a single headend all receive the same commercial. In Carles, the addresses of the individual receivers to receive particular messages are selected based on demographic and other information relating to the household of the subscriber (column 2, lines 3-12).

Additionally, the system disclosed in Carles does not insert commercials into pre-existing available time slots as in Schmelzer. Rather, Carles relies on a Commercial Message Management Server which controls the selection and timing of both program material and commercials: “Whenever server 10 selects programming for a particular subscriber, it also reserves space within the schedule for the appropriate commercial breaks” (column 3, lines 29-40). In Carles, “server 10 transmits instructions to each subscriber controlling what channel it should access for its next commercial message...When a commercial break is encountered in programming received by a subscriber, the subscriber’s converter 14 is controlled to receive the commercial channel instructed by the server 10. When the commercial break is over, converter 14 reverts to receiving the programming from server 10” (column 4, lines 22-35). As such, Carles is not directed toward insertion of a commercial into an available time slot in a program stream.

Applicants’ invention is directed to a system and method for insertion of advertisements into a video stream wherein different advertisements are broadcast into the stream to be used at different headends and wherein the advertisement content is

selected for each headend based on correlating an advertisement's characterization with statistical data relating to the subscribers at the headend.

Independent claim 1 recites (with emphasis added):

An advertisement management system for managing insertion of advertisements in video streams, the system comprising:

an avail opportunities module for recognizing one or more opportunities within the video streams available for advertisements;

an ad characterization module for characterizing the advertisements; and

a correlation module for determining a match between an avail and an advertisement, wherein the match is determined at least in part by correlating available subscriber characteristics with the advertisement characteristics.

As the Examiner admits, Schmelzer does not teach or suggest "characterizing the advertisements" or "correlating available subscriber characteristics with the advertisement characteristics" (Office Action, page 3). Thus, Schmelzer does not teach or suggest all features of independent claim 1.

Carles alone does also not teach or suggest Applicants' invention, since Carles' system does not involve the insertion of advertisements into video streams nor recognize opportunities (i.e., avails) within those video streams. Rather, as noted above, Carles makes space for commercials and uses a separate channel to transmit commercials during the spaces. Thus, Carles does not teach or suggest all features of independent claim 1.

When making a rejection under 35 U.S.C. § 103, the Examiner has the burden of establishing a *prima facie* case of obviousness. The Examiner can satisfy this burden only by showing an objective teaching in the prior art, or that knowledge generally available to one of ordinary skill in the art, would lead that individual to combine the relevant teachings of the references in the manner suggested by the Examiner. *See In re*

Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1998). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not the applicant's disclosure. *See In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). The mere fact that the prior art could be modified in the manner proposed by the Examiner, does not make the modification obvious unless the prior art suggests the desirability of the modification. *See Ex Parte Dussaud*, 7 U.S.P.Q.2d 1818, 1820 (Bd.Pat.App & Interf. 1988).

However, for a number of reasons, one skilled in the art would not have been motivated to combine Carles with Schmelzer, as the Examiner suggests, for "more efficiently targeting the instant commercials." As noted above, Schmelzer discloses a system with very limited ability to send different advertisements to different viewing areas. Because Schmelzer only discloses packing different ads into the same time slot, such that each ad directed to a different market occupies only a fraction of the time slot, the number of different advertisements that can be sent in Schmelzer is limited by the length of the advertising avail. In contrast, Carles is directed to sending commercials to individually addressable subscriber terminals and switches to a separate advertising stream in response to an instruction to display a commercial in a designated time slot. Accordingly, there would be no motivation for one of ordinary skill in the art to look to Carles to solve a problem not present in Schmelzer, nor to add unnecessary elements not required by Schmelzer. Furthermore, neither Schmelzer nor Carles explicitly or inherently contains a suggestion to make such a combination, and the Examiner has not pointed to any such objective teaching.

Moreover, if a proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *See In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959); MPEP § 2143.

The system in Carles is incompatible with that of Schmelzer. That is, the detailed demographic data disclosed in Carles, involving viewer gender, occupation, age, household income, length of residence and other factors (column 5, Table I), would be useless in Schmelzer, since Schmelzer's system cannot send different commercials

targeted to individual subscribers, but only to a very limited number of headends each servicing large geographic areas. The only subscriber information that is of practical use in Schmelzer's limited system is that of broad geographic regions, and thus broad viewing patterns. For example, Schmelzer discusses a four piece break-up of an avail time slot in which to pack commercials designated for Atlanta, Boston, Chicago and Dallas (column 1, lines 30-55). However, as the Examiner admits, this limited breakdown alone does not teach or suggest Applicants' invention. Schmelzer's system is inherently limited in the number of subgroups to which advertisements may be sent, since in Schmelzer only a very limited number of different ads can be inserted into a single avail. Because Schmelzer cannot send a large variety of ads during an avail, it is not possible to insert a variety of ads that meet different specific demographic criteria. Thus the best Schmelzer can manage is sending four different ads to four large cities. Given the inability of Schmelzer's system to send different advertisements to different subgroups of viewers, using the refined demographic data of Carles would require wholesale changes to Schmelzer's system. That is, even if one tried to correlate the viewer data to a set of different advertisements, it would be impossible to send enough different advertisements in the same avail time slot to meet all of the demographic combinations utilized in Carles. Furthermore, Carles' system is inherently different than Schmelzer's, since Carles switches to a separate commercial channel according to switching instructions received from the Commercial Management Server. Thus, in Carles, the designated ads are never "inserted" into the programming stream as in Schmelzer. Rather, Carles essentially accesses one of two or more separate channels depending on the desired content to be displayed. Thus, incorporating Carles' teachings into Schmelzer's system would significantly alter the manner in which Schmelzer's system operates. In view of the foregoing, Applicants respectfully submit that the combination of Schmelzer and Carles is improper.

Additionally, the prior art references, when combined, must teach or suggest all of the claim limitations. *See MPEP 2143.* However, even if one were to combine the teachings of Schmelzer and Carles, the resulting system would still not teach or suggest a system as claimed by Applicants. Advertisements as characterized in Carles require a system that is capable of sending those advertisements to individual subscribers.

However, the system in Schmelzer is incapable of such a distribution. That is, Schmelzer's system cannot provide advertisement availss that could be correlated (as recited in independent claim 1) with the advertisement characterizations provided by Carles. As such, including the features of Carles in the system taught by Schmelzer as suggested by the Examiner would still lack the teaching of "An advertisement management system for managing insertion of advertisements in video streams . . . comprising . . . a correlation module for determining a match between an avail and an advertisement," as recited in independent claim 1. Since there is no way to create enough availss for demographically similar viewers in Schmelzer, there is simply no way to have availss that could be correlated to advertisements as recited in claim 1.

Since the combination of Schmelzer and Carles is improper, and/or since such combination does not teach or suggest all elements of Applicants' invention, independent claim 1 is believed to be allowable over the Examiner's combination of Schmelzer and Carles. Dependent claims 2-7 and 11-39 are allowable at least by their dependency on independent claim 1. Reconsideration and withdrawal of the Examiner's rejection of claims 1-7 and 11-39 is respectfully requested.

The Examiner has rejected claims 8-10 as being unpatentable over Schmelzer in view of Carles and further in view of U.S. Patent No. 5,889,950 to Kuzma ("Kuzma").

For the same reasons discussed above with respect to the Examiner's rejection of claims 1-7 and 11-39, the combination of Schmelzer and Carles is improper and such combination does not teach or suggest all of the elements of independent claim 1. Applicants respectfully submit that the combination of Schmelzer, Carles and Kuzma is improper and also does not teach or suggest the elements missing from the combination of Schmelzer and Carles. Thus, independent claim 1 is believed to be allowable over the combination of Schmelzer, Carles and Kuzma. Accordingly, dependent claims 8-10 are allowable at least by their dependency on independent claim 1.

Additionally, the Examiner has admitted that Schmelzer and Carles do not teach the use of a graphical user interface for entering advertisement data. Claims 8-10 include the feature that "the advertiser interface is based on a graphical user interface." The Examiner has cited Kuzma as evidence that it would have been obvious to combine a

graphical user interface with the teachings of Schmelzer and Carles. Kuzma does not, however, teach or suggest the use of a graphical user interface, either in the passages the Examiner cites or elsewhere. Kuzma only discloses the use of a computer to schedule and deliver broadcast programs and web pages. Nowhere does Kuzma discuss the use of a graphical user interface for this purpose. Therefore, even if a combination with Schmelzer and/or Carles were proper, Kuzma in combination with Schmelzer and Carles does not teach or suggest all of the elements of claims 8-10. Accordingly, dependent claims 8-10 are believed to be allowable over the combination of Schmelzer, Carles and Kuzma. Reconsideration and withdrawal of the Examiner's rejection of claims 8-10 are respectfully requested.

The Examiner has rejected claims 40-55 and 58-145 as being unpatentable over Carles in view of U.S. Patent No. 5,889,950 to Freeman ("Freeman"). The Examiner contends that the combination of Carles and Freeman teaches all elements of these claims, arguing that it would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Carles with the feature of "channel multiplexing of content as taught by Freeman." Applicants respectfully traverse this rejection.

Freeman is directed entirely to smooth switching between alternative program sources. Freeman discloses an apparatus that multiplexes different program video onto a single channel to provide the viewer the ability to select between alternate versions of the same program (column 7, lines 33-48).

Independent claim 40 recites:

An apparatus for inserting advertisements in video streams,
the apparatus comprising:

an ad manager for receiving one or more advertisements
from one or more sources and for managing the ad insertion
process;

a program stream source for transmitting one or more
program streams; and

a multiplexer for multiplexing the program streams and the
advertisements based on insertion instructions from the ad
manager.

Independent claim 40 is directed to an apparatus that multiplexes program video streams and advertisements together. However, neither Carles nor Freeman teach or suggest multiplexing of advertisements onto video streams containing programming. As discussed above, Carles transmits commercials on channels that are separate and distinct from the programming channel and instructs the subscriber's receiver to tune to the appropriate channel when a commercial is to be shown (Carles, column 4, lines 22-35). Similarly, Freeman does not teach or suggest the invention recited in claim 40, since Applicants' invention multiplexes both commercials and advertisements onto the same stream and allows for a headend to place any of the multiplexed commercials with any of the program streams (see Figs. 10-13 and text page 19, line 29 – page 23, line 4 of the specification). Freeman makes no mention whatsoever of multiplexing commercials and program streams together.

Furthermore, Carles' system is inherently based on programming and commercials being transmitted over different channels. Thus, there would be no motivation to multiplex the two signals together onto a single channel, and therefore, there is no motivation to combine the teachings of Carles and Freeman. Furthermore, any modification of Carles to operate in this manner would necessarily change the principles of Carles' operation.

Moreover, the combination of Carles and Freeman, even if proper, which it is not, would, at best, only result in multiple commercials multiplexed onto a single channel and multiple video programs multiplexed on a separate channel, and not "multiplexing the program streams and the advertisements," as recited in independent claim 40. Thus, neither Carles nor Freeman, taken either individually or in combination, teach or suggest the invention of independent claim 40. Accordingly, independent claim 40 is allowable over the combination of Carles and Freeman.

Similarly, independent claim 53 recites, "multiplexing the selected advertisement with the program stream having the avail," and independent claim 99 recites, "multiplexing the program streams and the advertisements to generate one or more

multiplexed video streams.” For the reasons set forth above with respect to independent claim 40, the neither Carles nor Freeman teach or suggest all of the features of independent claims 53 and 99, taken either alone or in combination. Accordingly, independent claims 53 and 99 are believed to be allowable over the combination of Carles and Freeman.

With respect to independent claims 126 and 141, the Examiner has stated that the remarks made set forth with respect to claims 40 and 53 apply. Claim 126 recites the step of “inserting the targeted advertisements into the program streams,” which is not an element of either claim 40 or 53. Claim 141 recites “an advertisement inserter for inserting the targeted advertisements into the appropriate avail,” which is not an element of either claim 40 or 53. Applicants assume that by referring to his remarks concerning claims 40 and 53, the Examiner is relying on Carles in combination with Freeman. However, neither Carles nor Freeman disclose or suggest the insertion of targeted advertisements into program streams. As explained above with respect to independent claims 1 and 40, Carles discloses transmission of commercials and programs in separate video streams in separate channels. However, Freeman does not discuss the insertion of commercials into program streams. Additionally, as discussed above, the combination of Carles and Freeman is improper. Moreover, any such combination of Carles and Freeman would still not result in Applicants’ invention of independent claims 126 and 141. Accordingly, independent claims 126 and 141 are believed to be allowable over Carles and Freeman, taken alone or in combination.

Dependent claims 41-52, 54-55, 58-98, and 100-125, 127-140 and 142-145 are allowable at least by their dependency on independent claims 40, 53, 99, 126 and 141, respectively. Reconsideration and withdrawal of the Examiner’s rejection of claims 40-55, 58-145 are respectfully requested.

Conclusion

In view of the foregoing remarks, Applicants respectfully submit that the Examiner's rejections have been overcome, and that the application, including claims 1-55 and 58-145, is in condition for allowance. Reconsideration and withdrawal of the Examiner's rejections and an early Notice of Allowance are respectfully requested.

Respectfully submitted,

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